Behavioral Risk Factor Surveillance Survey: 2003 Oral Health Brief Results

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The effects of personal health behaviors on chronic disease began to receive recognition in the early 1980's, around the same time as telephone surveys were emerging as a new method of data collection. The Centers for Disease Control and Prevention (CDC) established the Behavioral Risk Factor and Surveillance Survey (BRFSS) in 1984 to monitor state-level prevalence of the major behavioral risks among adults using the telephone survey technology. The CDC developed core questionnaire modules that are used each year, in addition to rotating core modules used in alternating years, that allow for all states to compare their data. In 1995, the CDC added a section to the rotating core on oral health. Nevada has collected oral health data using the BRFSS in 1996, 1997, 1999, 2002, and 2003.

This is a brief report on the results of the oral health section of the 2003 BRFSS. Tables and graphs will summarize percentages obtained from the responses to these five questions:

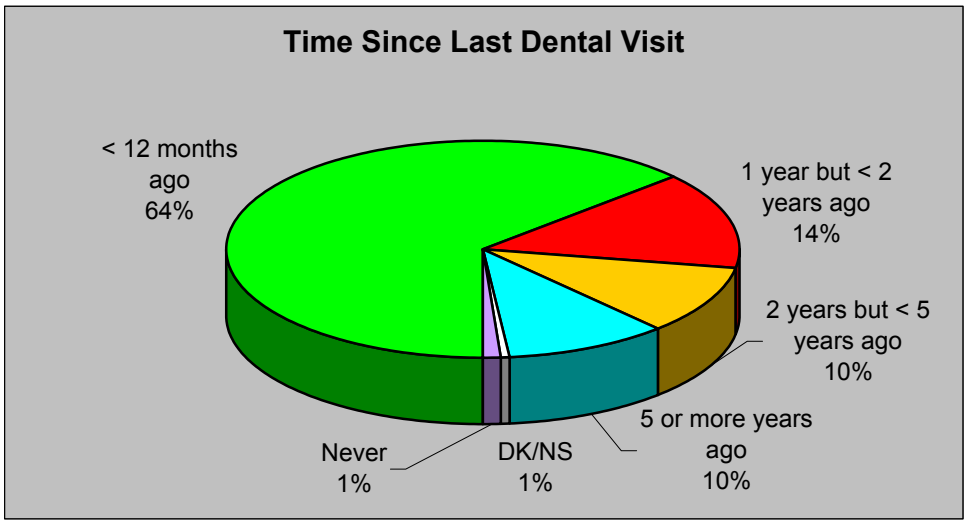
1. How long has it been since you last visited a dentist or a dental clinic?
2. How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.
3. How long has it been since you had your teeth "cleaned" by a dentist or dental hygienist?
4. What is the main reason you have not visited the dentist in the past year?
5. Do you have any kind of insurance coverage that pays for some or all of your routine dental care, including dental insurance, prepaid plans such as HMOs, or government plans such as Medicaid?

The responses for each question are cross-tabulated by sex, region, income, education, age group, and race/ethnicity. Only those graphs that show significant associations are shown. A document containing the data tables of all cross-tabulations is available upon request. Graphs showing the confidence intervals for specific results are included in the appendix to help the reader visualize differences between certain categories. The table below indicates where statistically significant associations may be found between the questions (in rows) and variables (in columns). See the specified pages for details.

	Sex	Region	Education	Age Group	Income	Race/Ethnicity	See Pages
Q1	X	X	X		X		2 - 4
Q2		X	X	X	X		5 - 7
Q3		X	X		X		8-10
Q4							10
Q5		X	X	X	X	X	11-14

Question 1: *How long has it been since you last visited a dentist or a dental clinic?*

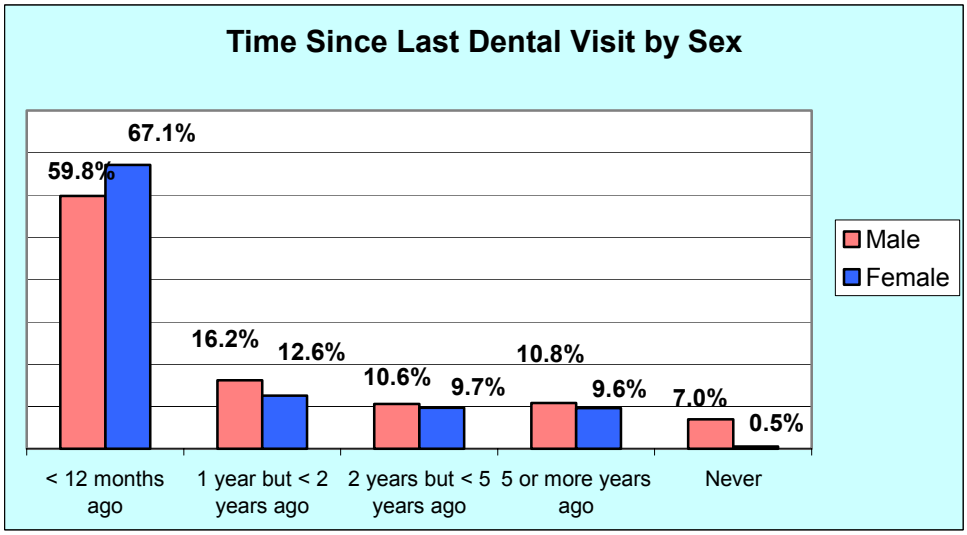
Q1.1.



*DK/NS = Don't know/Not sure

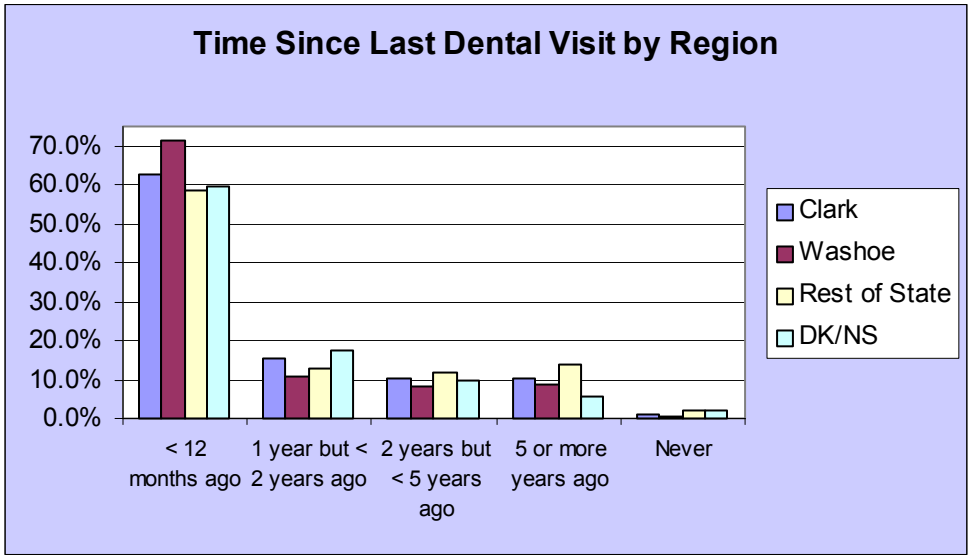
It is estimated that 64% of adults in Nevada have visited a dentist or dental clinic within the past year. However, this leaves 36% of the adult population, which has not been to a dentist for several years or possibly has never seen a dentist at all. Differences in the proportion of adults who have visited a dentist or dental clinic within the past year likely exist between categories of sex, region, education, and income, as seen in the following graphs:

Q1.2.



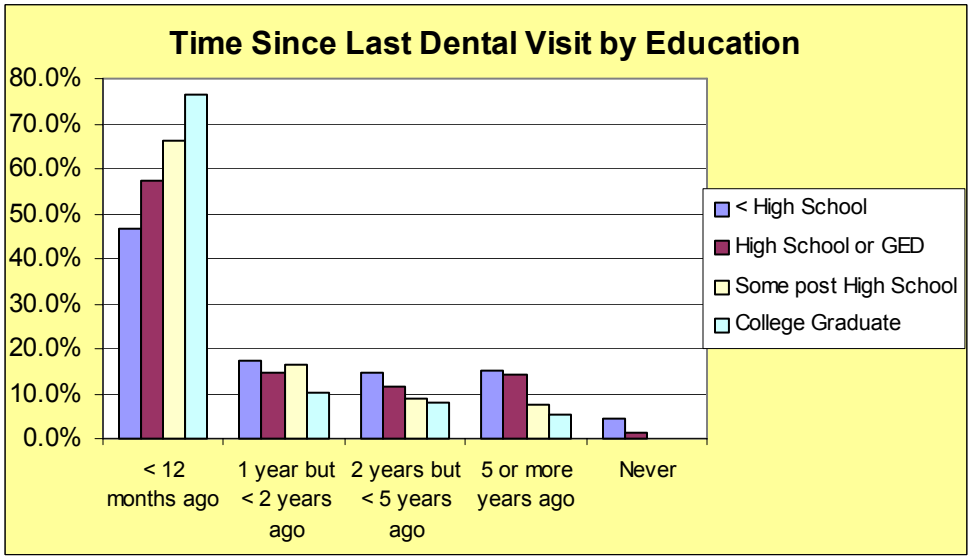
- It is estimated that more females (67.1%) have visited a dentist or dental clinic within the past year than males (59.8%). However, if a statistical difference between the sexes does exist here, it is most likely small. Out of all the questions asked on the 2003 BRFSS, this is the only one that exhibits a possible difference between the sexes.

Q1.3.



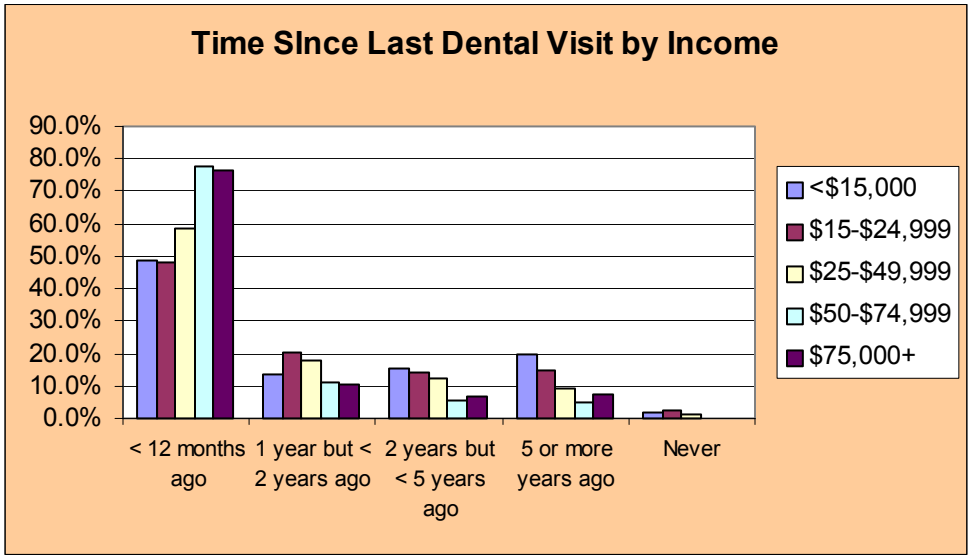
- Although no difference between Clark County (62.5%) and Rest of State (58.8%) can be inferred, there is most likely a difference between Washoe County (71.4%) and the two other categories. More adults in Washoe visited a dentist or dental clinic in the past year. This may mean that Washoe County's dental access problems are not as extreme as those in other parts of Nevada.

Q1.4.



- The results of the cross-tabulation of question 1 and education could serve as support for new programs in oral health education in schools. Although no differences can be concluded regarding adults with high school educations (57.4%) or less (46.5%), there is clearly a split between those who have a college education and the rest of the population. More college-educated people (76.3%) have visited a dentist or dental clinic within the past year than people with lower levels of education. It is also interesting that more adults who have some post high school education (66.2%) have been to a dentist or clinic in the past year than those with no high school education. Perhaps if education programs are targeted at high students or at the GED level, more people would seek preventive care at least once a year, as recommended.

Q1.5.



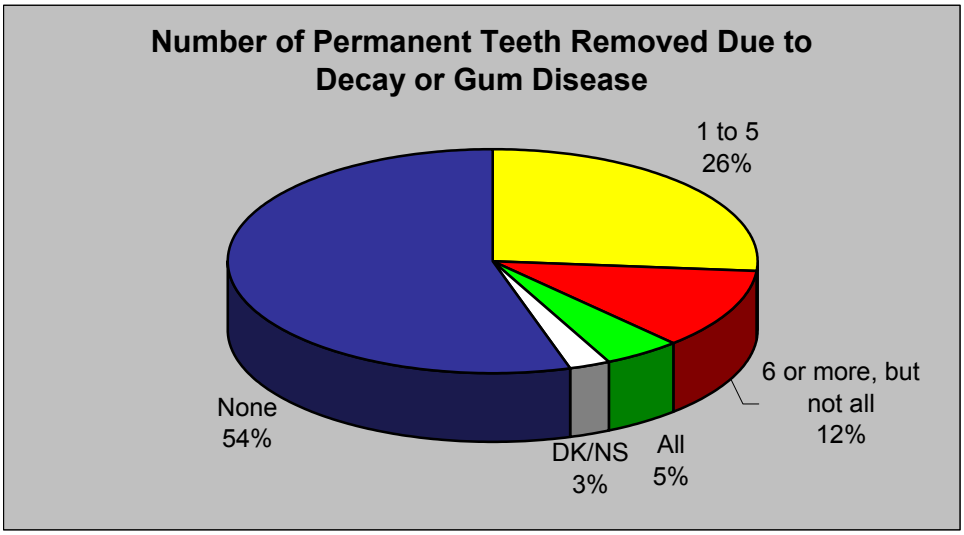
- The results in Q1.5. are basically a testament to the problem of access to care. It is clear that more adults who have an income of $50,000 or more have had a dental visit in the past year. Furthermore, this difference could be as large as 7.8%. The proportion of adults with income less than $15,000 who have had a dental visit in the past year is 48.6%, compared to 48.1% of adults in the $15,000 - $24,999 bracket, and 58.5% of adults in the $25,000 - $49,999 bracket.

Other results:

- No differences between age group could be inferred. Proportions ranged from 58.6% (65 yrs+ group) to 69.9% (45-54 yrs group).
- No differences between race or ethnicity were found. Proportions ranged from 53.6% to 66.9%. The percentage of Hispanics was not significantly higher than those of other races/ethnicities as might be expected according to other studies.

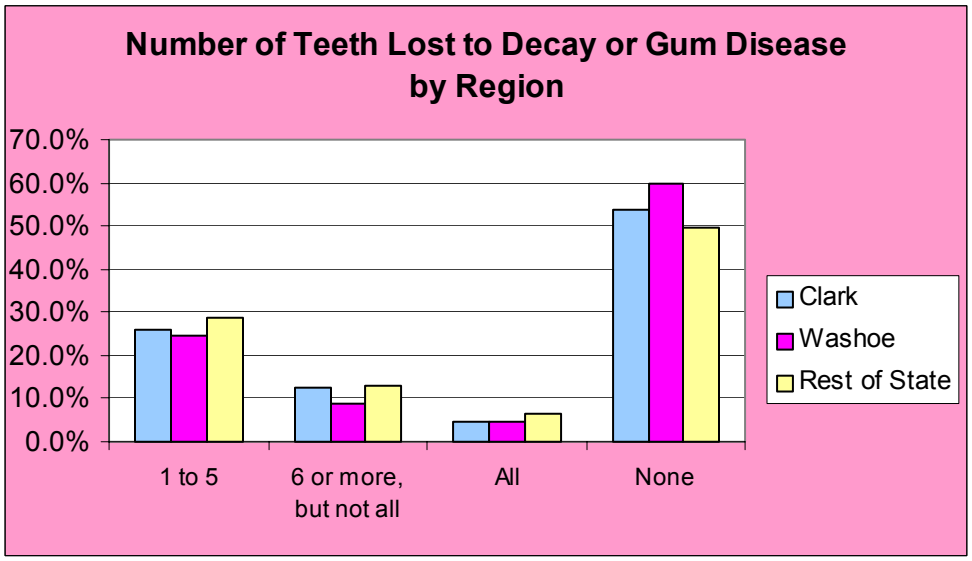
Question 2: *How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.*

Q2.1.



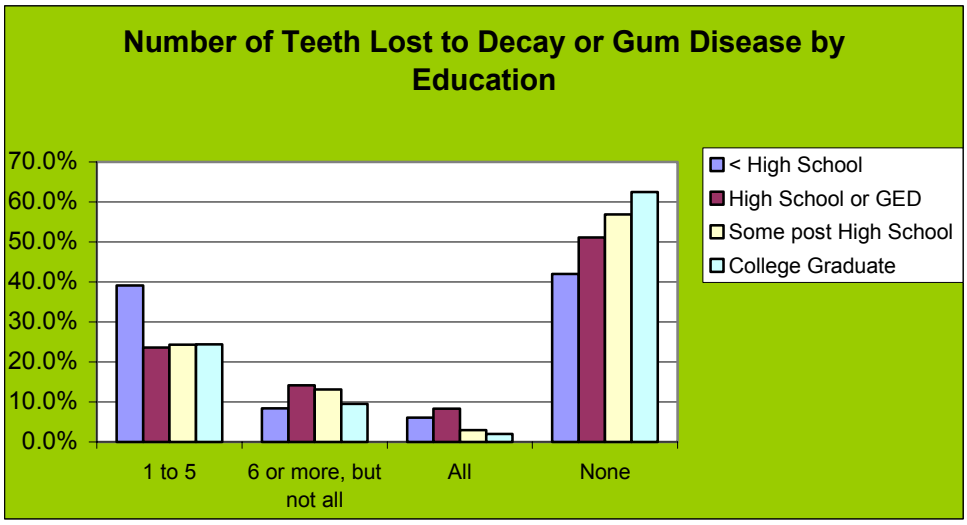
A little more than half (54%) of Nevada's adults have never had a permanent tooth extracted because of decay or gum disease. This is a wonderful result considering that the Healthy People 2010 objective is 42%. There is, however, still room for improvement. The percentage of adults who have lost 6 or more teeth is still high at approximately 12%, and almost a quarter of adults (26%) have lost between 1 and 5 teeth. Differences in the proportion of adults who have visited a dentist or dental clinic within the past year likely exist between categories of region, education, age group, and income, as seen in the following graphs:

Q2.2.



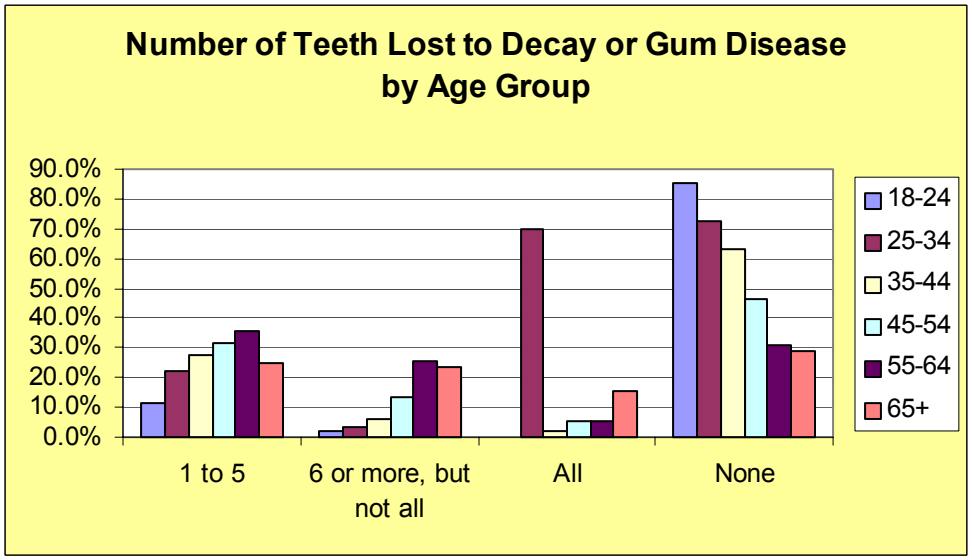
- Washoe County had the highest percentage of adults who have never had a tooth extracted due to decay or gum disease (59.6%). This is significantly greater than the percentage of adults in rural areas (49.7%) and possibly higher than the percentage in Clark County (53.8%). Even though Rest of State had the lowest proportion of adults who have never lost teeth to decay or gum disease, the Healthy People 2010 objective is still met in those regions.

Q2.3.



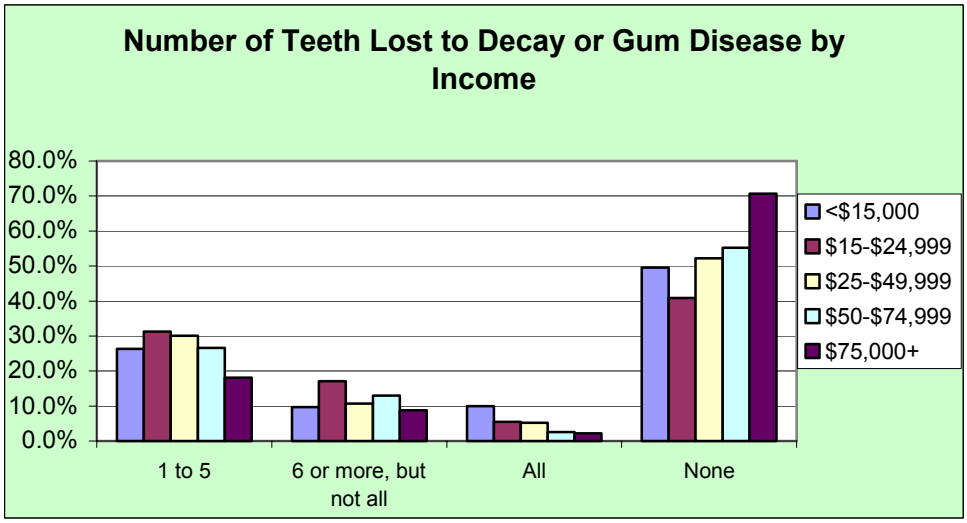
- The proportion of adults who have never lost teeth to decay or gum disease steadily increases with education level. The range of values is from 42% for adults with less than a high school education to 62.5% for college graduates. More college graduates have never had a tooth removed due to oral disease than high school graduates (51.1%) and under. The percentage of those with some post high school education (56.9%) was higher than that of those who did not graduate from high school.

Q2.4.



- As would be expected, the proportion of adults who have never lost teeth to decay or gum disease steadily decreases with age. In fact, the proportion of adults 55 and over is different from all other age groups, although there is no difference between the groups 55-64 yrs (30.6%) and 65 yrs+ (28.7%). 85.3% of the youngest group, 18-24 yrs, have never had a tooth extracted because of oral disease. As a side note, the percentage of adults who have lost all their teeth due to oral disease is 4.7%. For seniors age 65+, 15.4% have lost all their natural teeth. This meets the Healthy People 2010 objective of 20%.

Q2.5.



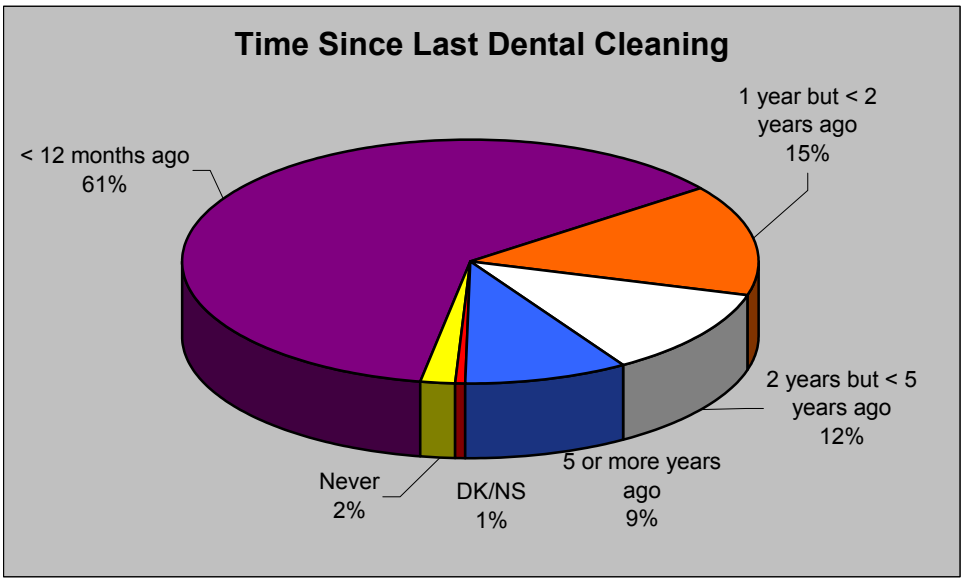
- The only income category that is completely set apart form the others is that of $75,000 and above, with 70.7% never having a tooth removed due to oral disease. The middle brackets of $25,000-$49,999 (52.2%) and $50,000-$74,999 (55.2%) have proportions very close in value. They are, however, likely to be different from the next lowest bracket of $15,000-$24,999 (40.9%).

Other results:

- No differences were found between the sexes. 57.8% of males had no teeth removed due to oral disease compared to 51.1% of females.
- No racial or ethnic differences could be inferred. Proportions ranged from 43.5% (Asian) to 66.5% (Hawaiian/Pacific Islander).

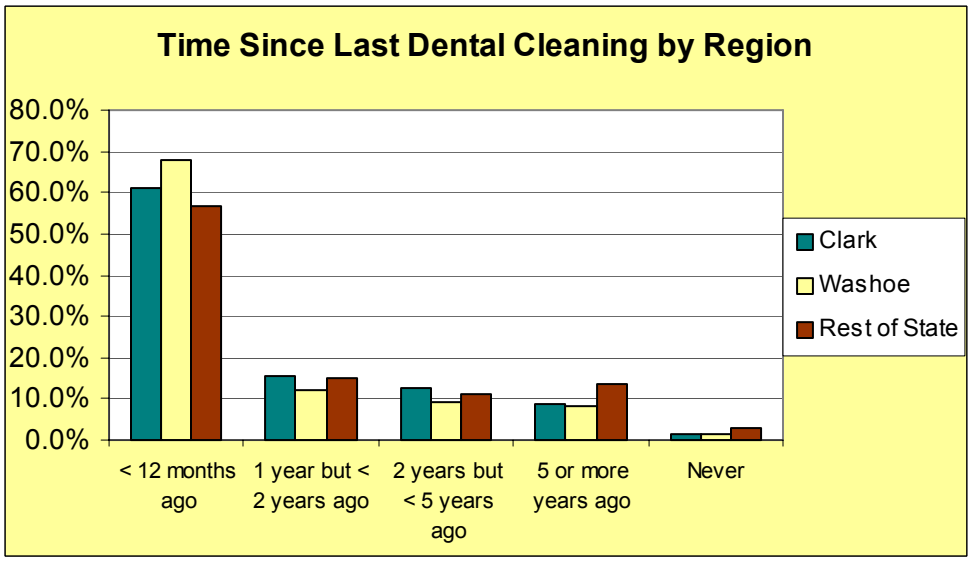
Question 3: *How long has it been since you had your teeth cleaned by a dentist or dental hygienist?*

Q3.1.



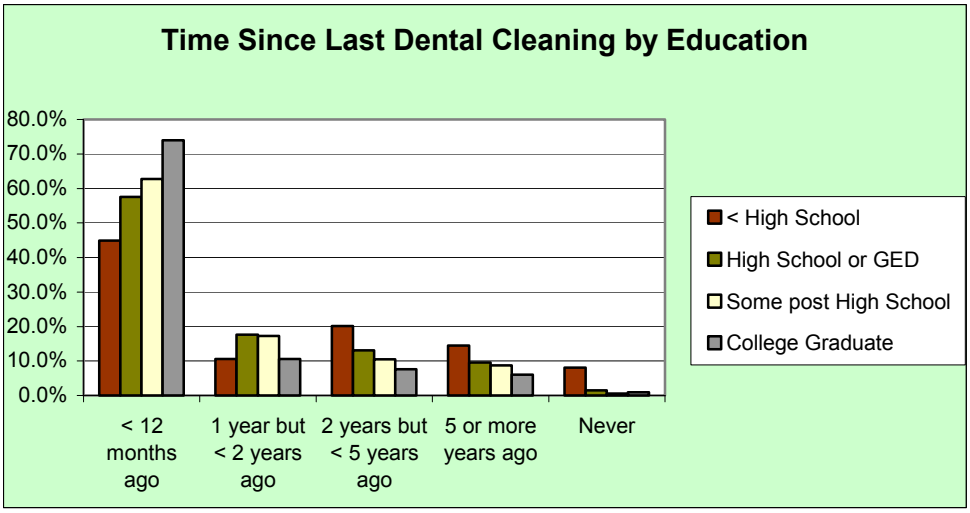
It is estimated that 61% of adults in Nevada have had a dental cleaning within the past year. However, this leaves 37% of the adult population, which has not had their teeth cleaned for several years or possibly never has. Differences in the proportion of adults who have visited a dentist or dental clinic within the past year likely exist between categories of region, education, and income, as seen in the following graphs:

Q3.2.



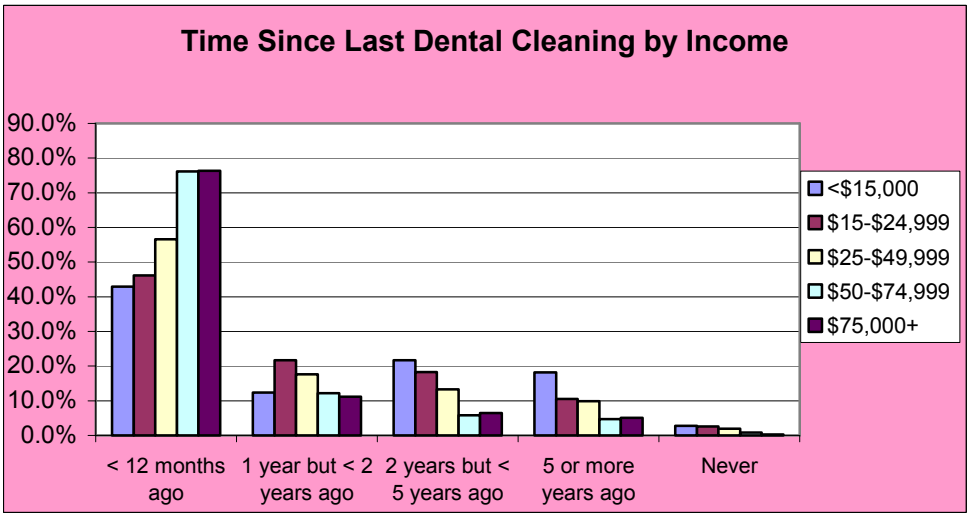
- Washoe County had the highest percentage of adults who have had a dental cleaning in the past year (68%). This is significantly greater than the percentage of adults in rural areas (56.6%) and possibly higher than the percentage in Clark County (61.1%). No difference between Clark County and Rest of State can be concluded. The results support earlier findings in Question 1 that Washoe County dental access problems may not be as extreme as those in the other regions.

Q3.3.



- The results of the cross-tabulation of question 3 and education could also serve as support for new programs in oral health education in schools. Although no differences can be concluded regarding adults with high school educations (57.5%) or less (44.9%), there is clearly a split between those who have a college education and the rest of the population. More college-educated people (74%) have had a dental cleaning within the past year than people with lower levels of education. It is also interesting that more adults who have some post high school education (62.7%) have had a dental cleaning in the past year than those with no high school education.

Q3.4.



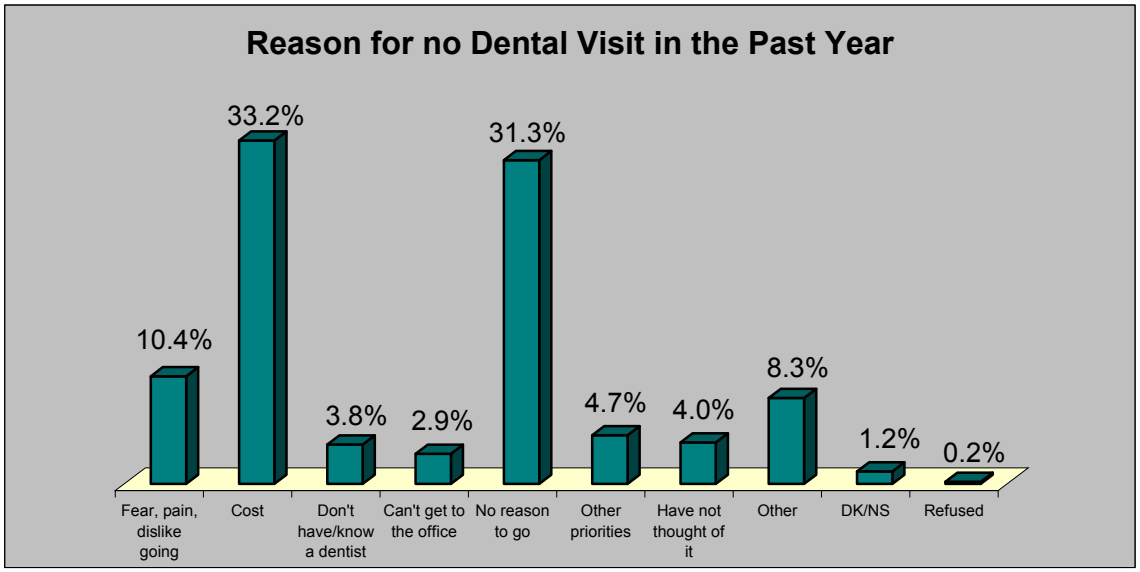
- The results in Q3.4. are another testament to the problem of access to care. It is clear that more adults who have an income of $50,000 or more have had a dental cleaning in the past year. Furthermore, this difference could be as large as 9.4%. The proportion of adults with income less than $15,000 who have had a dental cleaning in the past year is 42.9%, compared to 46.2% of adults in the $15,000 - $24,999 bracket, and 56.6% of adults in the $25,000 - $49,999 bracket. About 76% of adults 55 and over have had a dental cleaning in the past year.

Other results:

- No differences were found between the sexes. 60.3% of males had no dental cleaning in the past year compared to 63.6% of females.
- No differences were found between the age groups where proportions ranged from 58.3% for the 35-44 yrs group to 67.8% for the 45-54 yrs group.
- No differences were found between race/ethnicity categories, where proportions ranged from 50.1% (Other, non-Hispanic) to 68% (Asian).

Question 4: *What is the main reason you have not visited the dentist in the past year?*

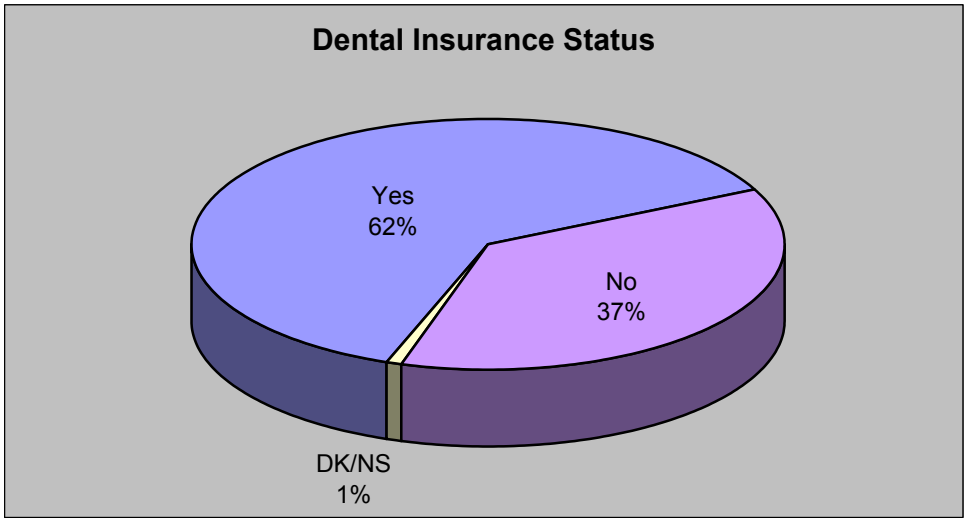
Q4.1.



The most common reasons why adults did not have a dental visit in the past year are that they could not afford it, they are apprehensive of the dentist or dislike going, and that they had no reason to seek care. Many of the choices for this question point to access problems. However, two of the most common choices, fear and no reason to go, are indicators that more education is needed statewide. The importance of oral health and dental care is not reaching a large number of people in the state. The results of this question suggest that possibly 16% of the population could be convinced to seek preventive care If education is provided effectively. Due to small numbers of respondents, question 4 is not cross-tabulated by the other variables.

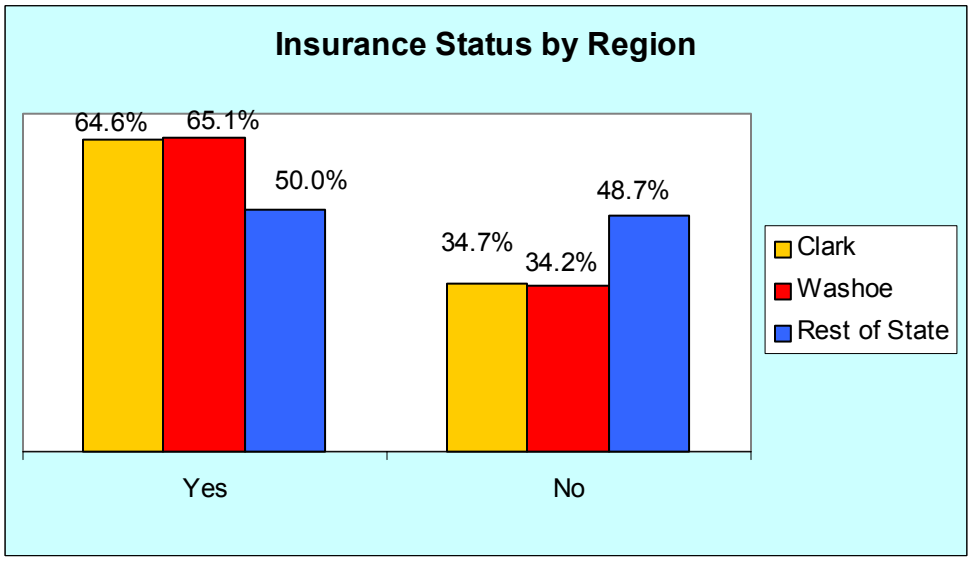
Question 5: *Do you have any kind of insurance coverage that pays for some or all of your routine dental care, including dental insurance, prepaid plans such as HMOs, or government plans such as Medicaid?*

Q5.1.



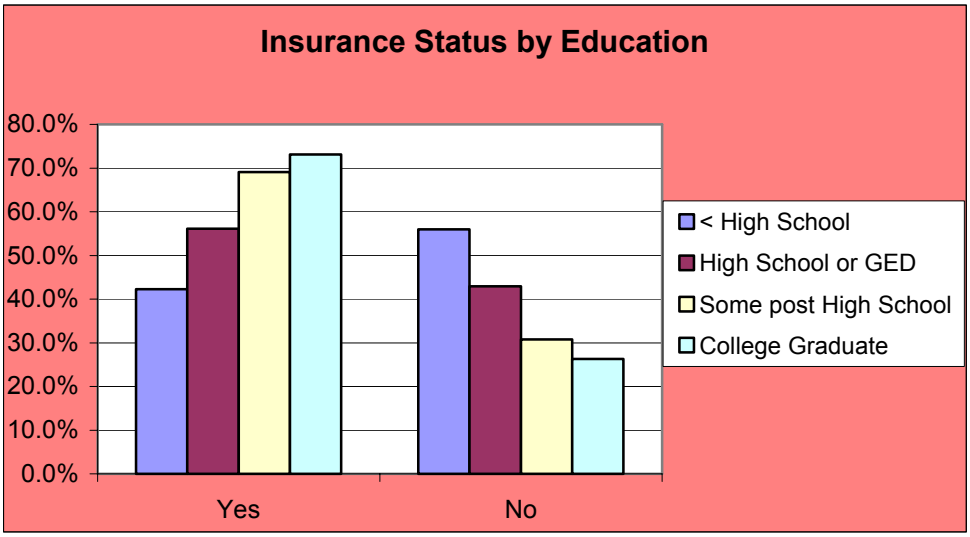
According to the Surgeon General's report *Oral Health in America*, there are approximately 32.5 million people in the Unites States without health insurance, 22.6 % of which have unmet dental needs. A high percentage of adults in Nevada have no dental insurance (37%). Differences in the proportion of adults who have no dental insurance exist between categories of region, education, age group, income, and ethnicity as seen in the following graphs:

Q5.2.



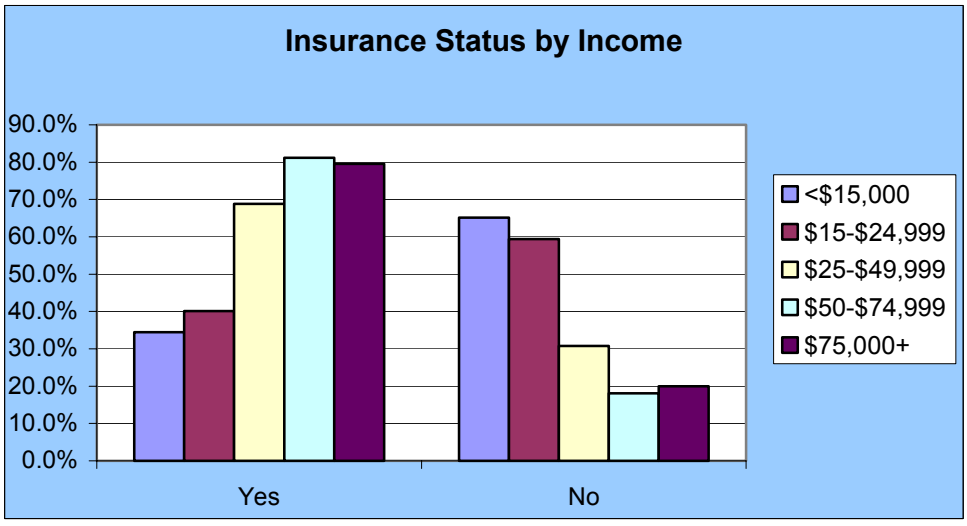
- The proportion of adults with no dental insurance in Clark and Washoe counties are nearly equal (34.7% and 34.2%, respectively). However, the proportion of dental uninsured in the rest of the state is significantly higher at 48.7%. This only adds to other access problems that residents of rural already have, such as lack of transportation and availability of dental professionals.

Q5.3.



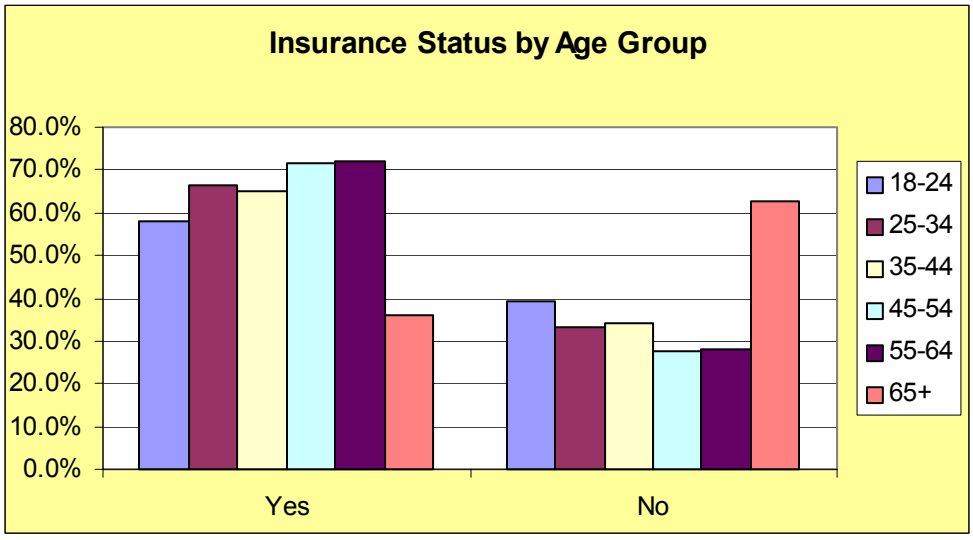
- The lower the education level, the higher the proportion of adults with no dental insurance. More adults with a high school education (42.9%) or less (56%) had no dental insurance than those with some post high school education (30.8%) or college graduates (26.3%). Although there seems to be an association between insurance status and education, it is unclear that the differences exist because of education or because of the associated differences in income that are also related to education level.

Q5.4.



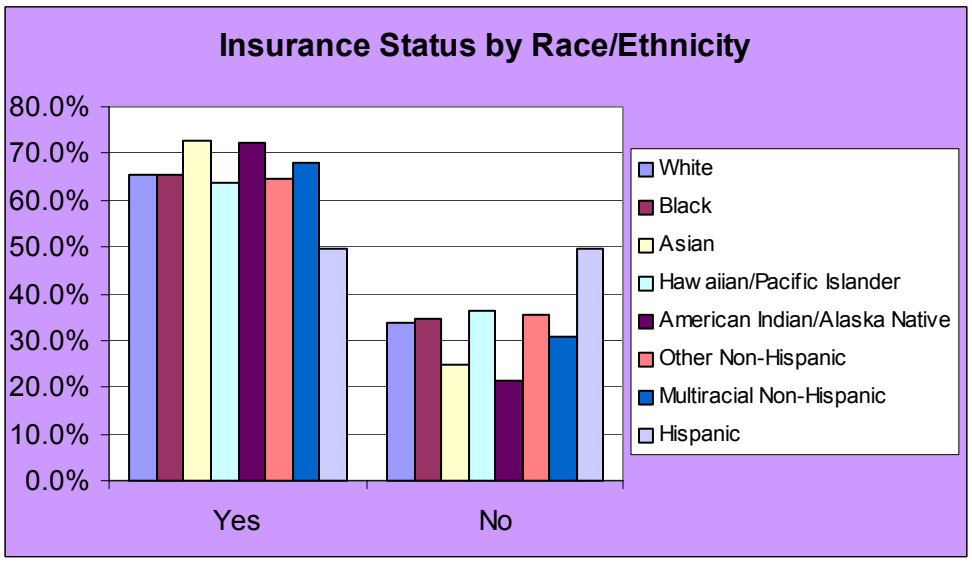
- Proportions of adults with no dental insurance who earn $50,000 or greater fall between 18% and 20%. This is significantly lower than the percentages in the other categories, especially as compared to the lowest two brackets where the figures are 34.5% for <$15,000 and 40.1% for $15,000-$24,999. Almost one-third (30.8%) of adults who earn between $25,000 and $49,999 have no dental insurance.

Q5.5.



- All age groups have similar proportions of dental uninsured, ranging from 28% to 39.5%. One age group, however, is very significantly different from the others. Seniors 65 and over have an incredibly high proportion of uninsured at 62.6%. This supports the results of a 1999 study by Cristman Associates, which stated that at least 38.5% of Nevada seniors have no third party payer for oral health prevention and treatment coverage. In fact, it seems that the number of uninsured in the senior population has grown and that there is need for some change in policy and provider availability.

Q5.6



- Differences between most racial groups cannot be determined. The percentages range from 21.3% (American Indian/Alaskan) to 49.8% (Hispanic). However, there was a clear difference in ethnicity. The percentage of Hispanic adults with no dental insurance is higher than both multiracial non-Hispanics (31%) and White non-Hispanics (33.8%). Of all five questions, this is the only one that identified an association with race/ethnicity.

Other results:

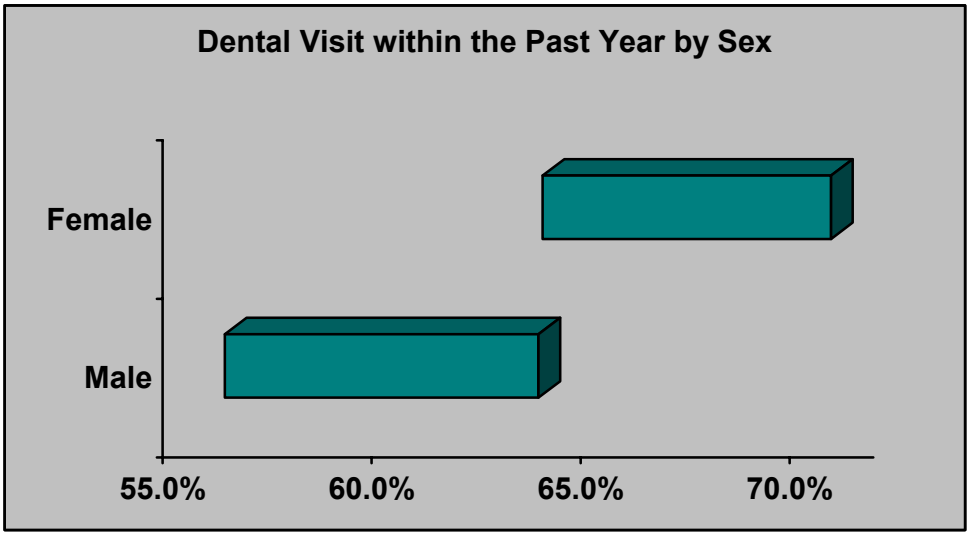
- No differences were found between the sexes. 35.9% of males had no dental insurance compared to 37.9% of females.

Appendix of Analysis Charts

The 95% confidence intervals for the results are presented graphically throughout this appendix. A 95% confidence interval denotes that 95% of the time, the true proportion of adults is in the depicted range of values. When confidence intervals overlap, a statistical difference between the results cannot be determined. When they *do not* overlap, we can suspect that there is a statistical difference between the categories. This method of analysis does not serve as a formal statistical test; however, it gives insight into the results while taking the sample size into consideration.

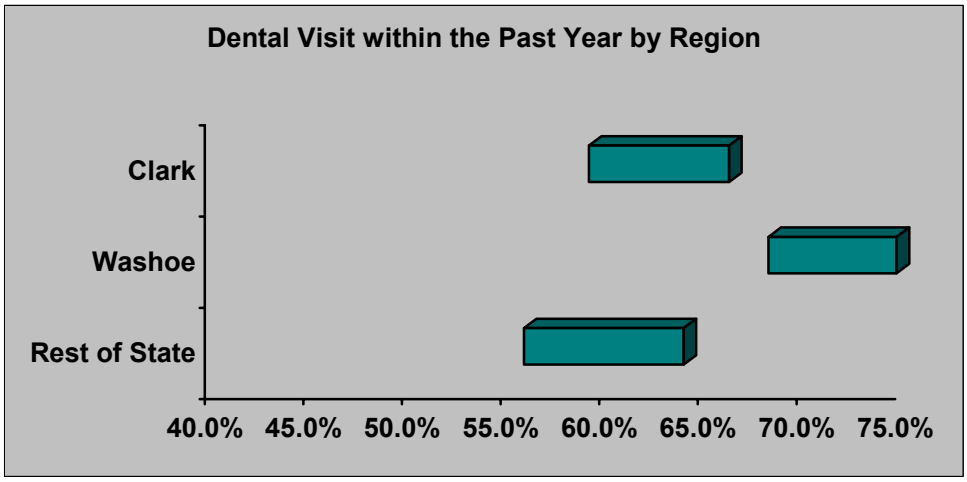
Charts for Question 1 Results:

A.

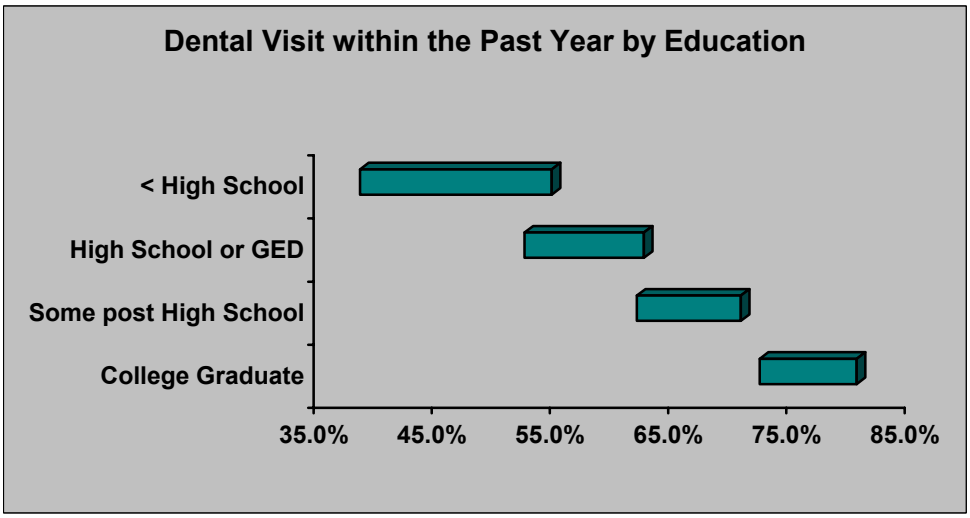


*Note: The confidence intervals for Male and Female, depicted by the bars, do not overlap. Hence, there is likely a statistical difference between the sexes.

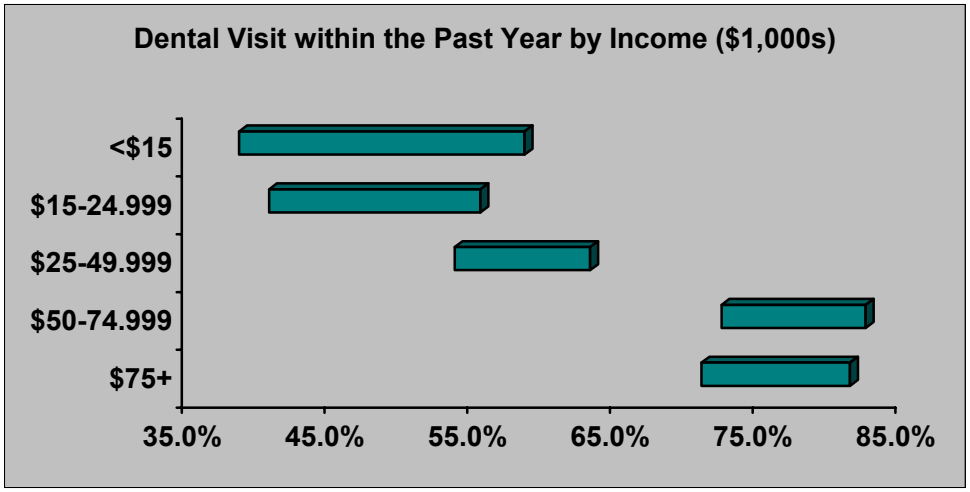
B.


Dental Visit within the Past Year by Region
Clark
Washoe
Rest of State
40.0%
45.0%
50.0%
55.0%
60.0%
65.0%
70.0%
75.0%

C.

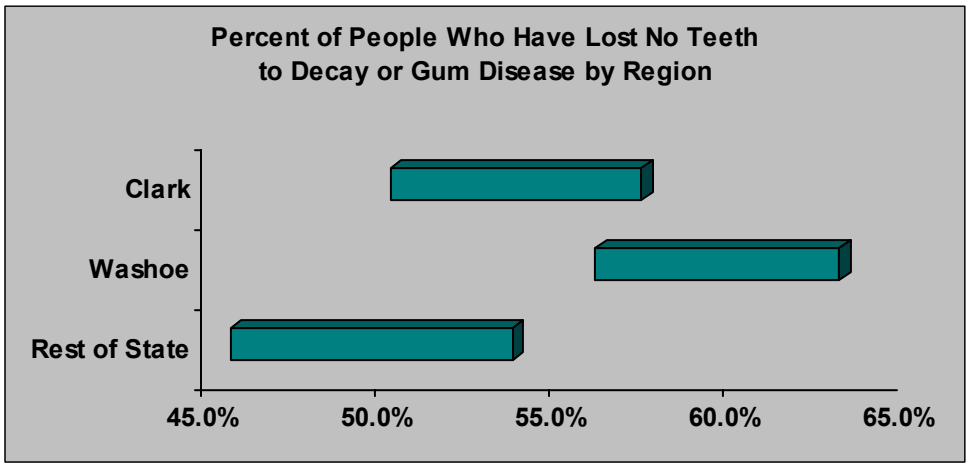

Dental Visit within the Past Year by Education
< High School
High School or GED
Some post High School
College Graduate
35.0%
45.0%
55.0%
65.0%
75.0%
85.0%

D.

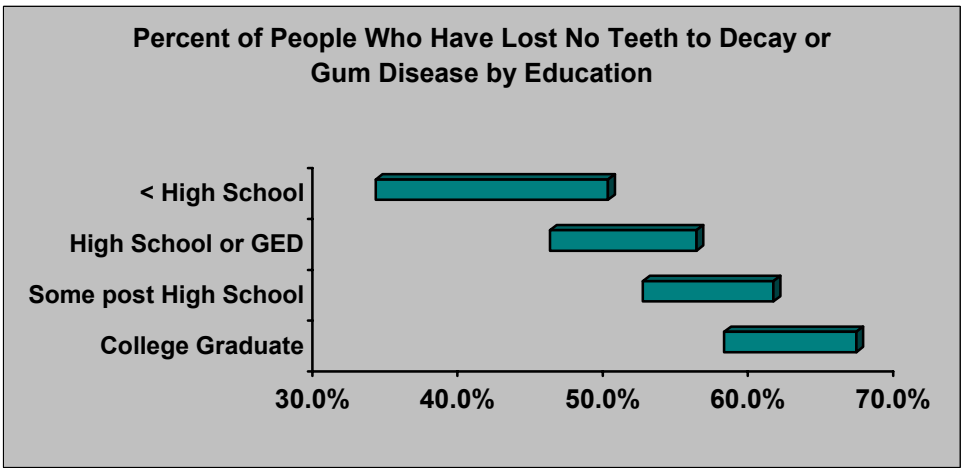

Dental Visit within the Past Year by Income ($1,000s)
<$15
$15-24.999
$25-49.999
$50-74.999
$75+
35.0%
45.0%
55.0%
65.0%
75.0%
85.0%

Charts for Question 2 Results:

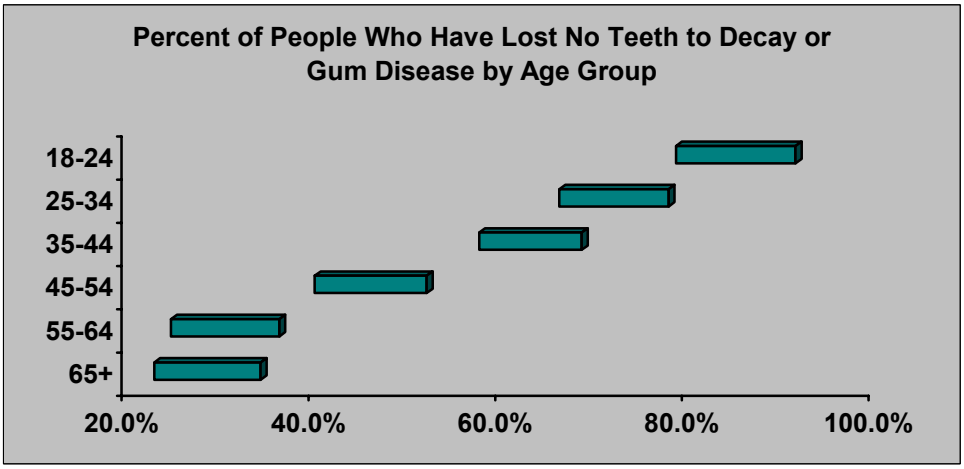
A.



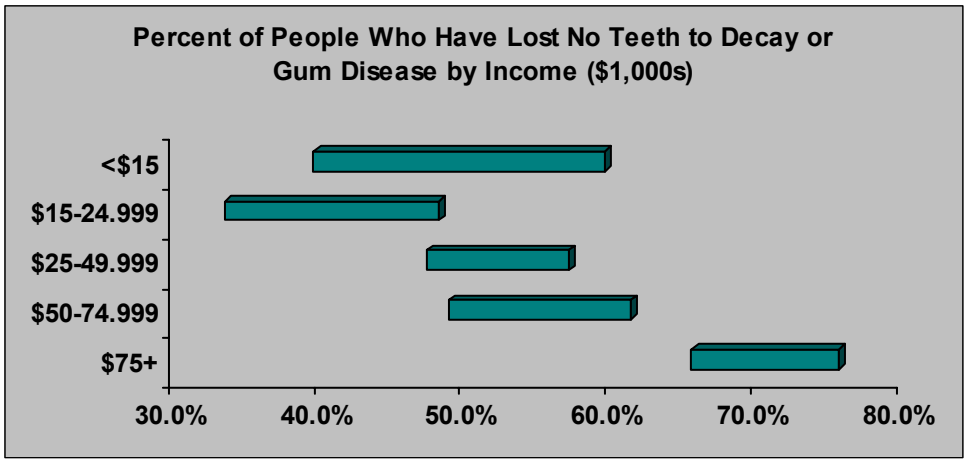
B.



C.

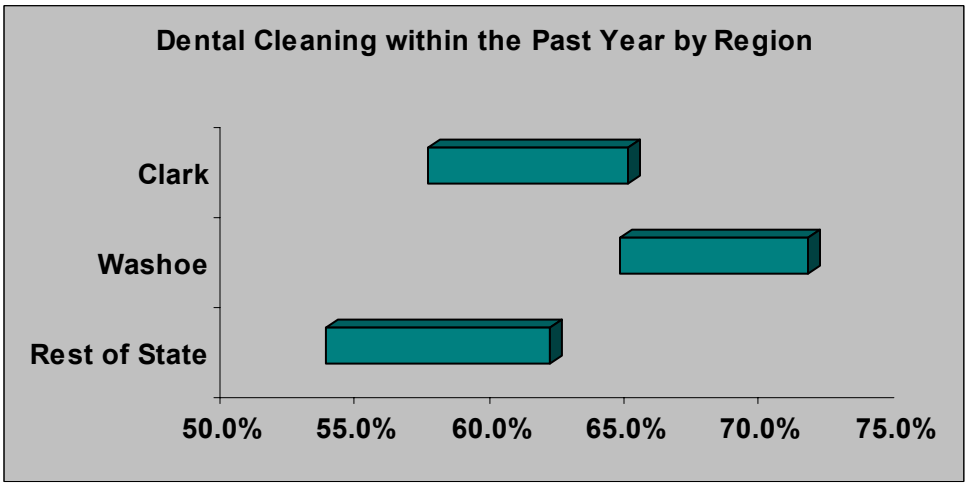


D.

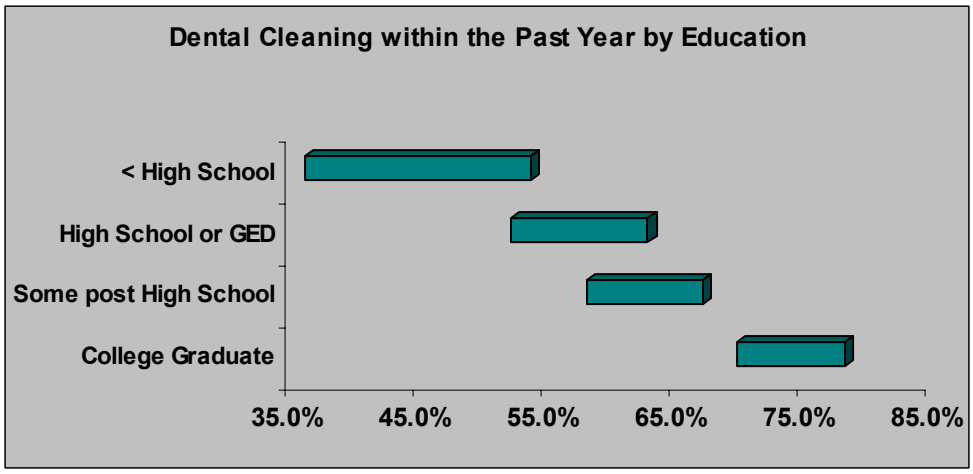


Charts for Question 3 Results:

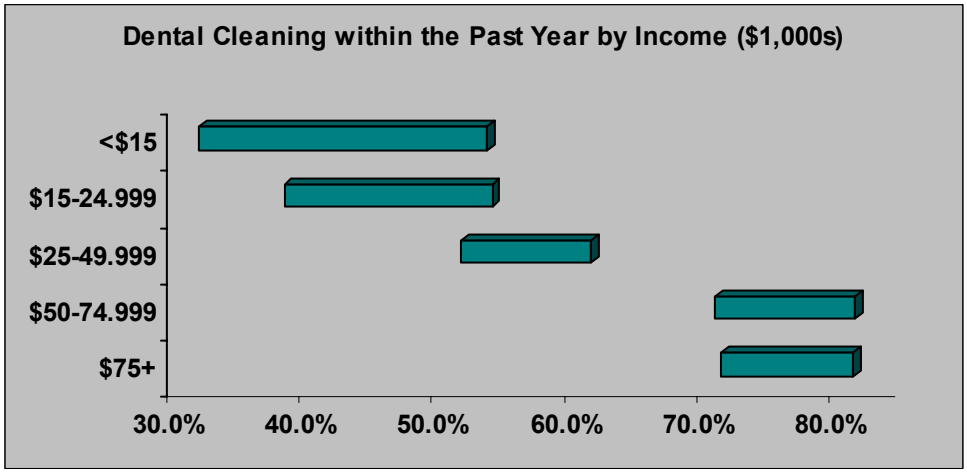
A.



B.

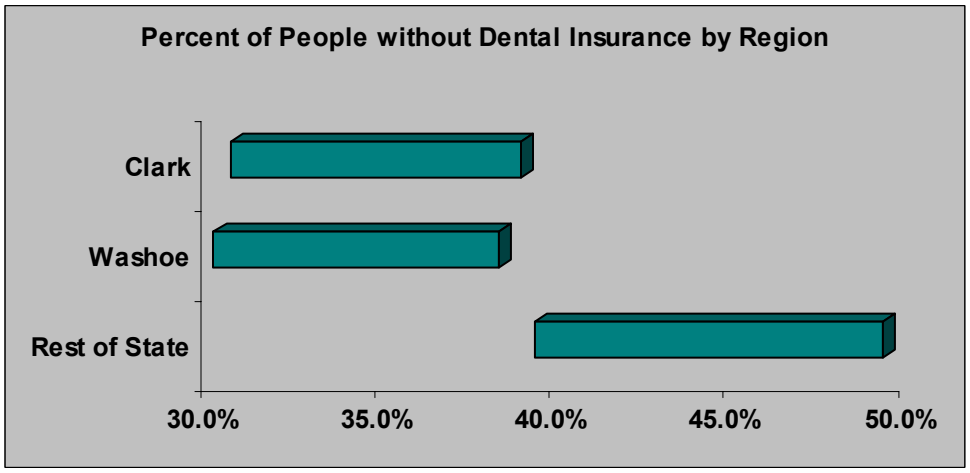


C.

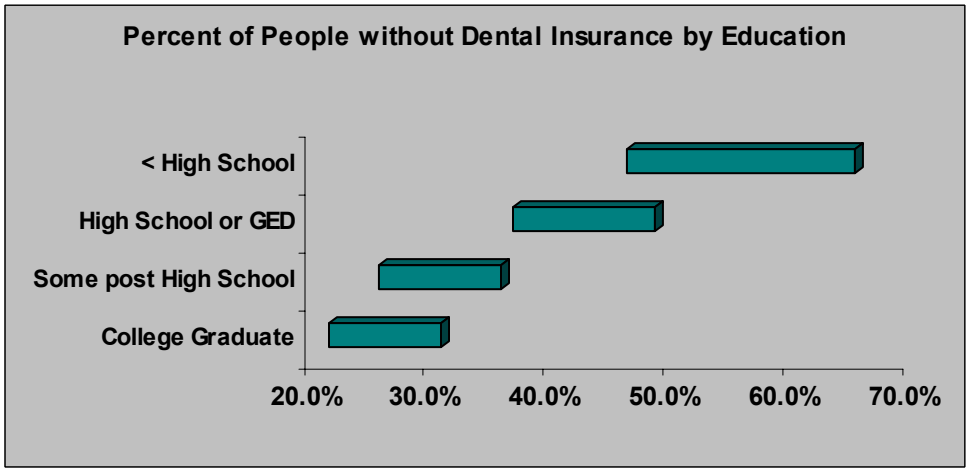


Charts for Question 5 Results:

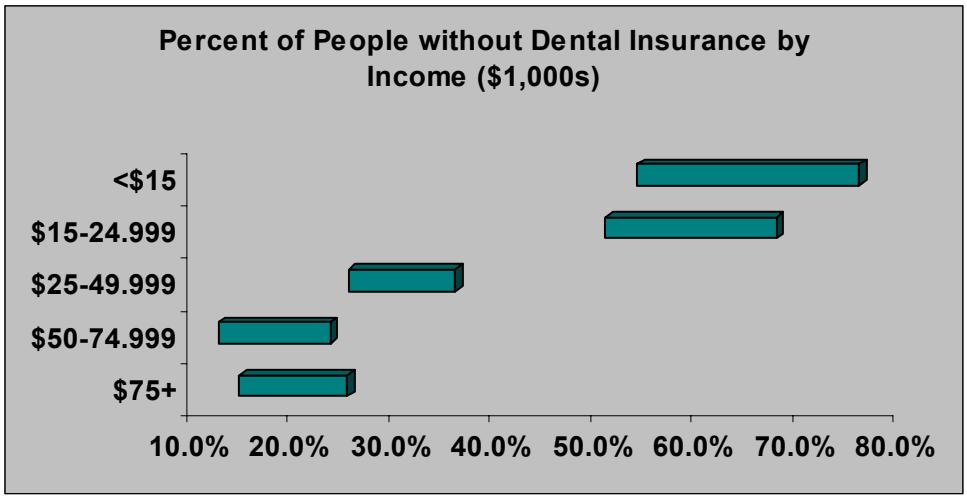
A.



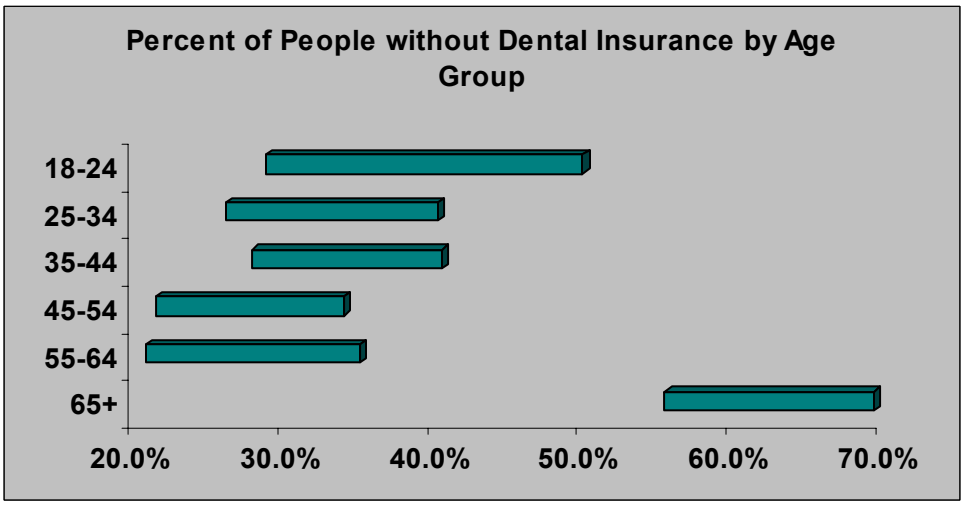
B.



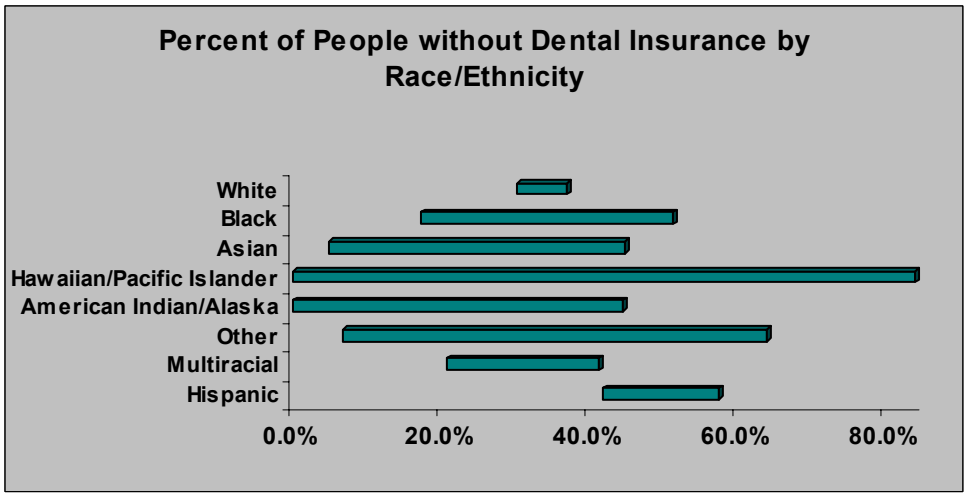
C.


Percent of People without Dental Insurance by Income ($1,000s)
<$15
$15-24.999
$25-49.999
$50-74.999
$75+
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%
80.0%

D.


Percent of People without Dental Insurance by Age Group
18-24
25-34
35-44
45-54
55-64
65+
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%

E.


Percent of People without Dental Insurance by Race/Ethnicity
White
Black
Asian
Hawaiian/Pacific Islander
American Indian/Alaska
Other
Multiracial
Hispanic
0.0%
20.0%
40.0%
60.0%
80.0%